

AMENDMENT TO THE CLAIMS:

1. (Currently Amended) A method of optically scanning a vehicle wheel rotatable about a stationary axis using a wheel balancing machine, wherein the wheel includes a rim and wheel disc portions, the method comprising the steps of:

providing a first set of sensor devices, pivotally mounted to a frame of the wheel balancing machine, for scanning the inside of the wheel;

providing a second set of sensor devices, fixed to a wheel guard hood of the wheel balancing machine, for scanning the outside of the wheel, wherein each set of the sensor devices includes a light source for emitting a light beam on to the surface of the wheel, and a receiver that moves together with the light source, for receiving a light beam reflected from the wheel surface;

providing a position sensor configured to specify positions of the light sources and the receivers of the sensor devices;

~~emitting at least one light beam from at least one given position onto the surface of the vehicle wheel;~~

~~at least at one given position, receiving at least one beam reflected by the surface of the vehicle wheel corresponding to the at least one light beam; and~~

determining dimensions and positions of constituent parts of the rim and the wheel disc portions of the vehicle wheel based on the respective directions of the at least one emitted light beam and the at least one reflected beam.

Claim 2 (Cancelled)

3. (Original) A method according to claim 1, wherein at least two mutually opposite surface locations, one on the inside of the wheel and the other on the outside of the wheel, are scanned, and the thickness of the wheel material is ascertained in a computer-aided procedure based on the positional data related to the scanned locations.

4. (Original) A method according to claim 1, wherein rim flanges are scanned and the shape or the profile of the respective rim flange is determined based on the scanned data.

5. (Original) A method according to claim 1, wherein the wheel type is based on the scanned data of the wheel constituent parts.

6. (Original) A method according to claim 1, wherein balancing weights needed to be fixed to the rim is detected by the scanning operation.

7. (Original) A method according to claim 1, wherein the rotary angle position of a tire inflation valve is detected by scanning the wheel surface.

8. (Original) A method according to claim 7, wherein the rotary angle position of the tire inflation valve is determined as a reference position for rotary angle positions on the vehicle wheel.

9. (Original) A method according to claim 7, wherein the rotary angle positions of wheel spokes, in particular in the region of the spoke ends which are connected to the rim, are detected.

10. (Currently Amended) An apparatus for optically scanning a vehicle wheel affixed with a stationary axis to a measuring shaft of a wheel balancing machine, wherein the wheel includes a rim and wheel disc portions, the apparatus comprising:

a first set of sensor devices, pivotally mounted to a frame of the wheel balancing machine, configured to scan the inside of the wheel;

a second set of sensor devices, fixed to a wheel guard hood of the wheel balancing machine, configured to scan the outside of the wheel, wherein each set of the sensor devices includes a at least one light source for emitting a light beam on to the surface of the wheel;wheel, and a receiver that moves together with the light source, for receiving a light beam reflected from the wheel surface;

a position sensor configured to specify positions of the light sources and the receivers of the sensor devices; and

an evaluation device, coupled to the receiver-receivers and [[a]] the position sensor, for specifying the positions of the light source and the receiver;

wherein the evaluation device ascertainsascertaining dimensions and positions of constituent parts of the rim and the wheel disc portions of the vehicle wheel using a computer-aided procedure based on the respective directions of the emitted beam-beams and the reflected beam-beams.

Claim 11. (Cancelled)

Claim 12. (Cancelled)

13. (Original) An apparatus according to claim 12, wherein the vehicle manufacturer determined based on the scanned data related to the wheel constituent parts by accessing a data bank containing information related to the wheel constituent parts and associated vehicle manufacturer.